

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
3 August 2006 (03.08.2006)

PCT

(10) International Publication Number  
**WO 2006/080635 A1**

(51) International Patent Classification<sup>7</sup>: **G02F 1/1335**

(74) Agent: **CHO, In-jae**; Newkorea International Patent & Law Office, 3rd Fl., Janghyun Bldg., 637-23, Yeoksam-dong, Gangnam-gu, Seoul 135-909 (KR).

(21) International Application Number:  
PCT/KR2005/003164

(22) International Filing Date:  
23 September 2005 (23.09.2005)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10-2004-0076981  
24 September 2004 (24.09.2004) KR

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): **LG CHEM, LTD.** [KR/KR]; Lg Twin Towers, East Tower 20, Yeouido-dong, Yeongdeungpo-gu, Seoul 150-721 (KR).

(72) Inventors; and

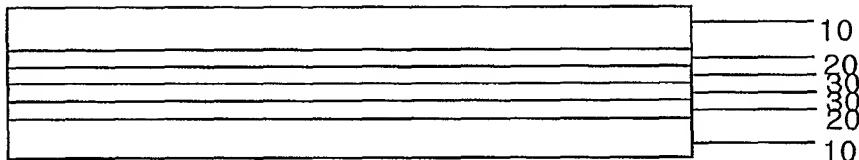
(75) Inventors/Applicants (for US only): **LEE, Ho-jun** [KR/KR]; 410-310, Expo Apt., Jeonmin-dong, Yuseong-gu, Daejeon 305-762 (KR). **KIM, Dong-ryul** [KR/KR]; 109-1102, Lucky Hana Apt., Sinseong-dong, Yuseong-gu, Daejeon 305-721 (KR). **RYU, Sang-uk** [KR/KR]; #402, 305-12, Jangdae-dong, Yuseong-gu, Daejeon 305-380 (KR). **KIM, Hee-jung** [KR/KR]; 3-326, LC Chem. Apt., 386-1, Doryong-dong, Yuseong-gu, Daejeon 305-340 (KR). **KIM, Gi-cheul** [KR/KR]; 3-208, LG Chem. Apt., 381-42, Doryong-dong, Yuseong-gu, Daejeon 305-340 (KR).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: OPTICAL COMPENSATOR FILM FOR LCD VIA MULTILAYER STRUCTURE



(57) Abstract: The present invention relates to a compensator film having multilayer structure including both negative optical retardation in thickness direction and optical retardation in in-plane direction at the same time to improve wide view angle, in which a polymer base layer provides optical retardation in in-plane direction, organic or organic/inorganic hybrid protective layer formed on the base layer contributes to the improvement of mechanical properties such as curl prevention and polymer orientation of coating layer, and the out-most layer, a polymer coating layer, endows optical retardation in thickness direction. The multilayer, in which each layer is individually functioning, enables the preparation of a compensator film having proper optical retardation.

WO 2006/080635 A1